

In the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A packet router that supports multi-time scale resource management, comprising:

a management agent (“MA”) that manages a differentiated services policy information database operable to store policies on forwarding packets in the packet router;

a resource server system (“RSS”) that controls forwarding of packets in the packet router based on adaptive selections of policies from the policy information database;

a flow measurement system (“FMS”) that monitors packet flows through the packet router and generates statistic reports which affect the RSS selection of control;

wherein the FMS includes:

a dynamic component for controlling adaptation of the packet router to dynamic service requirements and resource conditions, wherein the dynamic component further comprises;

a monitor resource controller for receiving adaptive selections of policies from the policy information database and for distributing the generated statistics reports; and

a monitor resource abstraction library that functions as a real-time monitor executive and generates the statistics reports; and

a hardware forwarding engine (“HFE”) that receives and forwards packets in response to the RSS controls.

2. (previously presented) The packet router of claim 1 wherein the MA resides in a management plane of a communications network.

3. (original) The packet router of claim 1 wherein the RSS resides in a control plane of a communications network.

4. (original) The packet router of claim 1 wherein the HFE resides in a data plane of a communications network.

5. (original) The packet router of claim 4 wherein the communications network comprises an internet protocol (“IP”) network.

6. (previously presented) The packet router of claim 1 wherein the FMS distributes the statistics reports generated by the FMS.

7. (original) The packet router of claim 1 wherein the FMS includes a monitor resource abstraction library (“MRAL”) that functions as a real-time monitor executive and generated the statistics reports.

8. (original) The packet router of claim 1 wherein the FMS includes a monitor data collector/data source controller (“MDC”) for receiving data collected at observation points of the HFE.

9. (previously presented) A system for supporting multi-time scale resource management in a packet router, the system comprising:

means for managing a differentiated services policy information database that stores policies on forwarding packets in the packet router;

means for controlling forwarding of packets in the packet router based on adaptive selections of policies from the policy information database;

means for monitoring packet flows through the packet router based on an interpreted service level agreement related to the adaptive selections of policies from the policy information database;

means for generating statistic reports that affect a resource server system selection of control;

wherein the means for generating statistic reports further comprises:

- a reports buffer for buffering the generated statistics reports;
- a policy information buffer; and
- a dynamic component for controlling adaptation of the packet router to dynamic service requirements and resource conditions, wherein the dynamic component further comprises:
 - a monitor resource controller for receiving adaptive selections of policies from the policy information database and for distributing the generated statistics reports;
 - a monitor resource abstraction library that functions as a real-time monitor executive and generates the statistics reports; and
 - a monitor data collector/data source controller for receiving data collected at observation points of the means for receiving and forwarding; and

means for receiving and forwarding packets in response to the resource server system controls.

10. (original) The system of claim 9 wherein the means for managing is a management agent (“MA”).

11. (original) The system of claim 9 wherein the means for controlling forwarding of packets in the packet router is a resource server system (“RSS”).

12. (original) The system of claim 9 wherein the means for receiving and forwarding is a hardware forwarding engine (“HFE”).

13. (original) The system of claim 9 wherein the means for monitoring is a flow measurement system (“FMS”).

14. (original) The system of claim 13 wherein the means for generating statistic reports is a flow measurement system (“FMS”).

15-16. (cancelled).

17. (previously presented) A method of providing multi-time scale resource management in a packet router, the method comprising:

managing a differentiated services policy information database that stores policies on forwarding packets in the packet router;

controlling forwarding of packets in the packet router based on adaptive selections of policies from the policy information database;

monitoring packet flows through the packet router;

generating statistic reports that affect the forwarding of packets in the packet router;

controlling adaptation of the packet router to dynamic service requirements and resource conditions;

receiving adaptive selections of policies from the policy information database and for distributing the generated statistics reports; and

receiving and forwarding packets in response to the forwarding of packets in the packet router.

18. (original) The method of claim 17 wherein the managing is performed by a management agent.

19. (original) The method of claim 17 wherein the controlling forwarding of packets in the packet router is performed by a resource server system.

20. (original) The method of claim 17 wherein the monitoring is performed by a flow measurement system.

21. (original) The method of claim 17 wherein the generating statistic reports is performed by a flow measurement system.

22. (original) The method of claim 17 wherein the receiving and forwarding is performed by a hardware forwarding engine.